

Catalyst and process for preparing propenal by oxidation of propane

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Inventor(s): CHI YAWU (CN); DU HONGZHANG (CN); WANG XIANGAO (CN)
Applicant(s): DALIAN CHEMICAL PHYSICS INST (CN)
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Abstract

A multi-component Bi-Contg. oxide catalyst for preparing acrolein by direct oxidation of propane has a chemical formula: $AaBbCcDdO_4$, where A is the element in group IA or IB, C is the element in group VB and D is the element in group VIB. Said reaction takes place between propane (15-60%), oxygen (30-80%) and nitrogen (0-40%) at 330-520 deg.C for 0.5-4 seconds. The unreacted propane can be reused. Its advantages are easily controlled reaction conditions, high selectivity (52.8%) and high one-pass yield (16.7%) for acrolein.

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